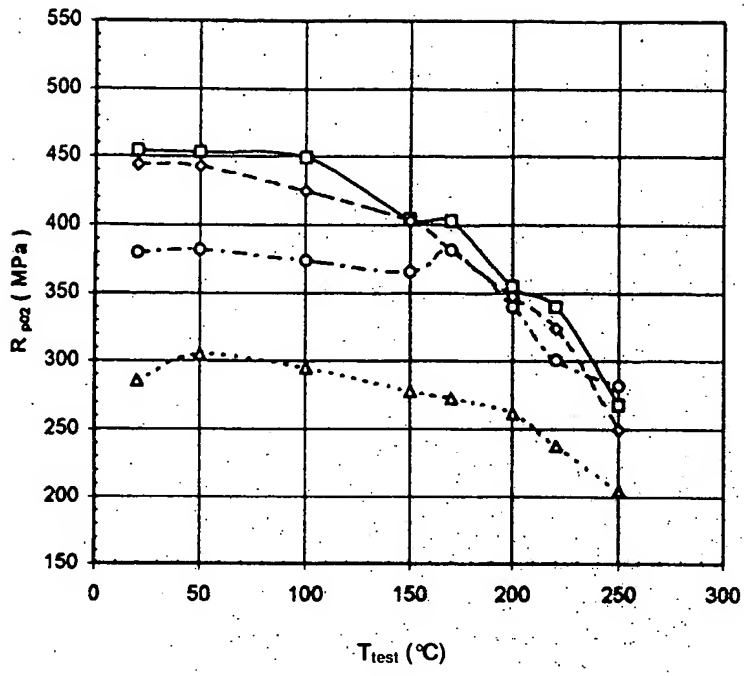
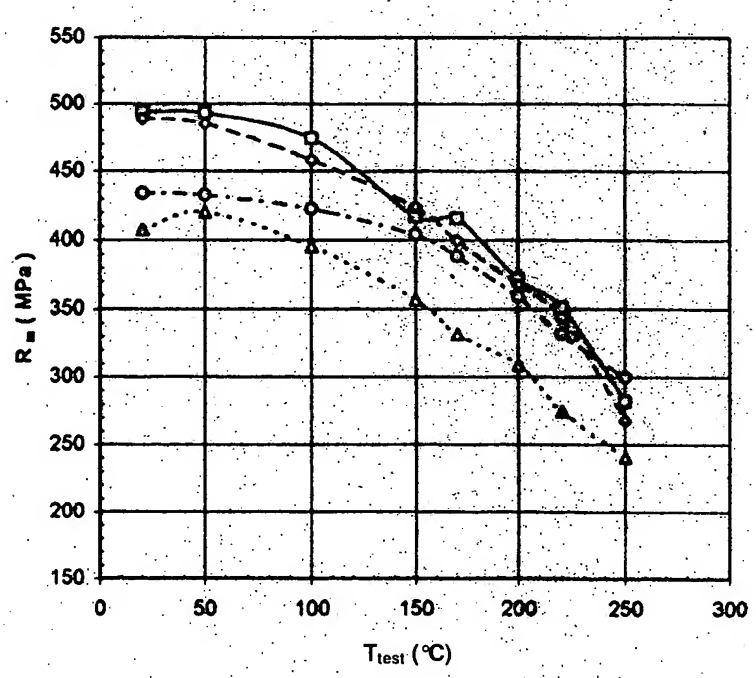
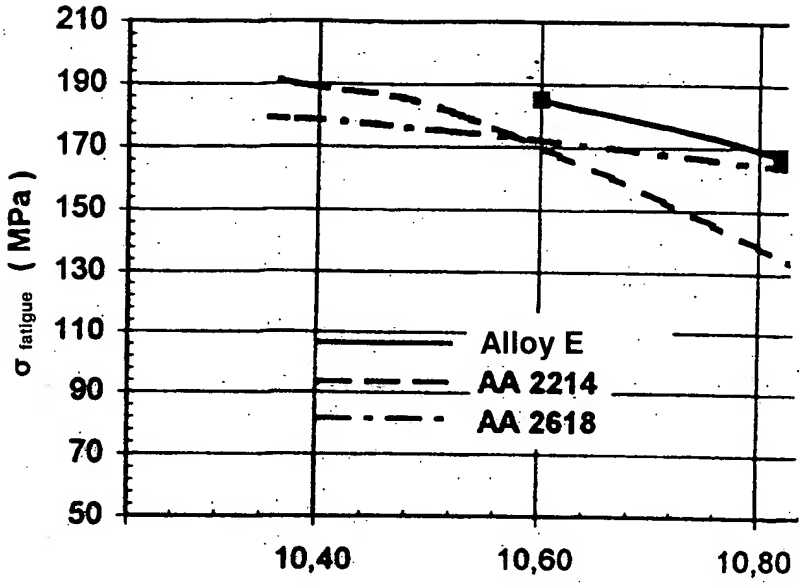




Alloy E — AA 2214 — AA 2219 — AA 2618

Fig. 1



$$LMP = [(T_{test} + 273.15)*(20 + \log t_{fatigue})]/1000$$

Fig. 2

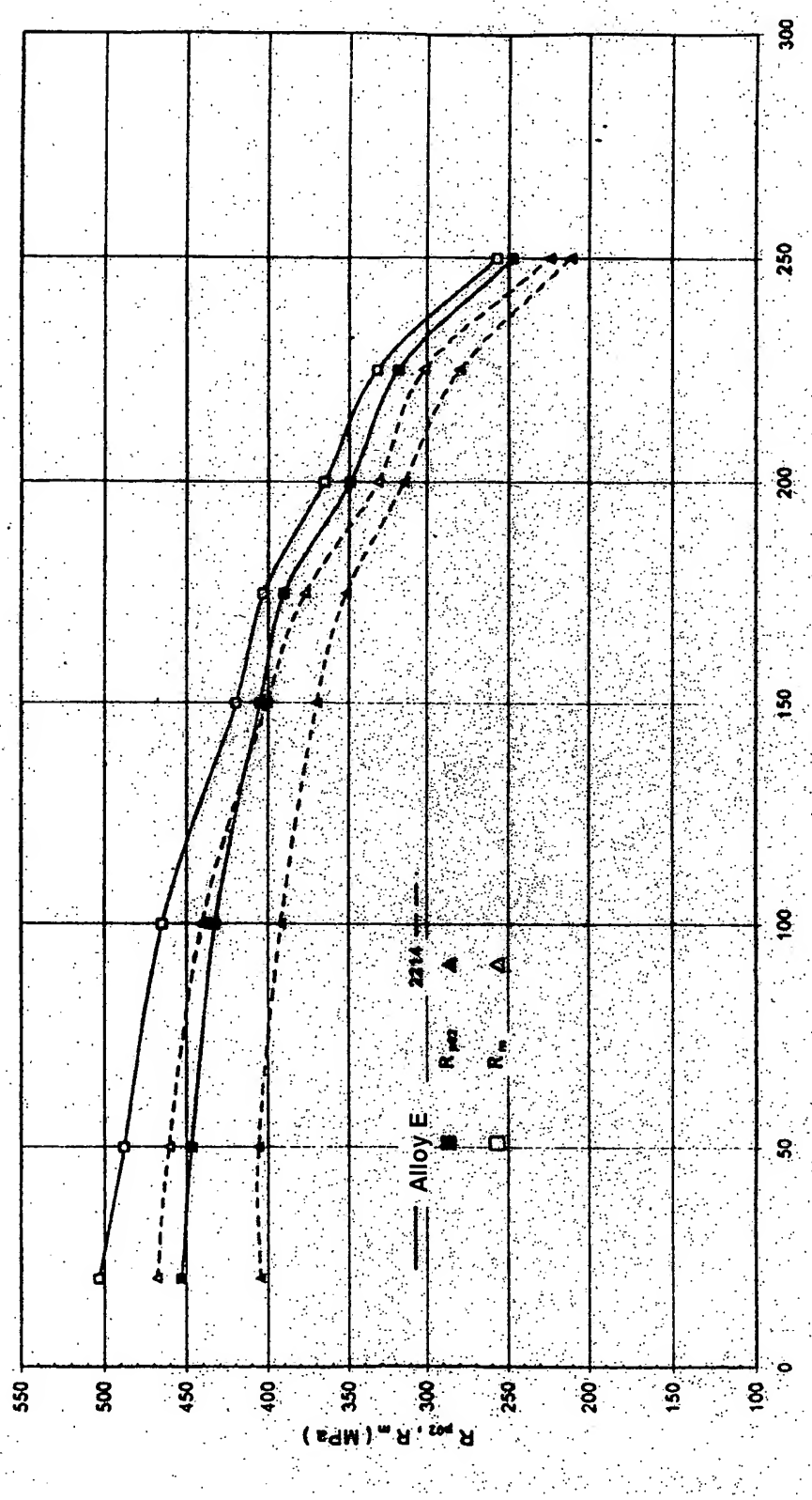

Alloy E
2214
$R_{p0.2}$
R_m
$R_{p0.2}$, R_m (MPa)
Temperature (°C)
550
500
450
400
350
300
250
200
150
100
300
250
200
150
100
50
0

Fig. 3

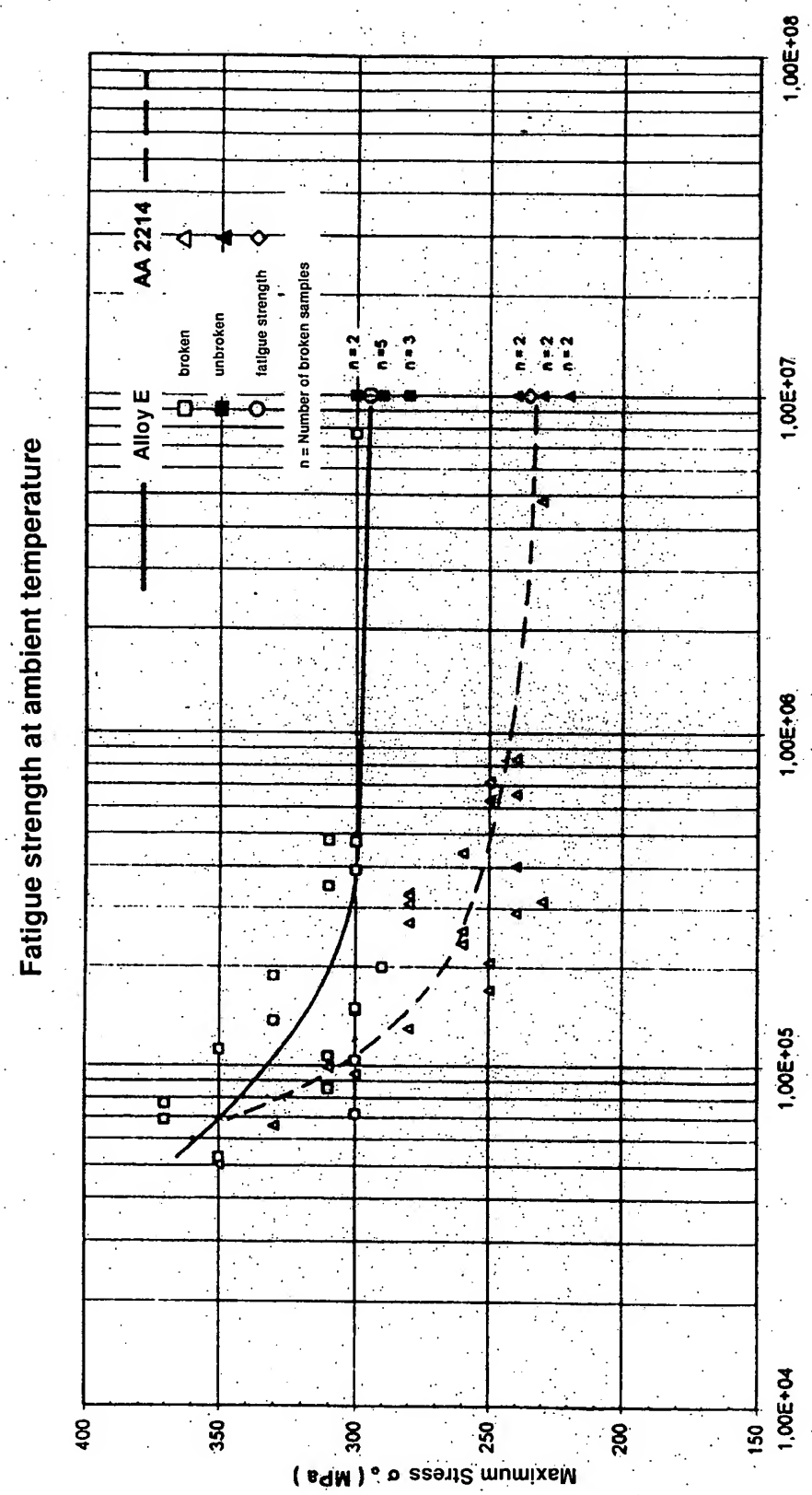

Fatigue strength at ambient temperature
Alloy E
AA 2214
broken
unbroken
fatigue strength
n = Number of broken samples
n = 2
n = 5
n = 3
n = 2
n = 2
n = 2
Maximum Stress σ a (MPa)
400
350
300
250
200
150
1,00E+04
1,00E+05
1,00E+06
1,00E+07
1,00E+08
Stress Reversals (-)

Fig. 4a

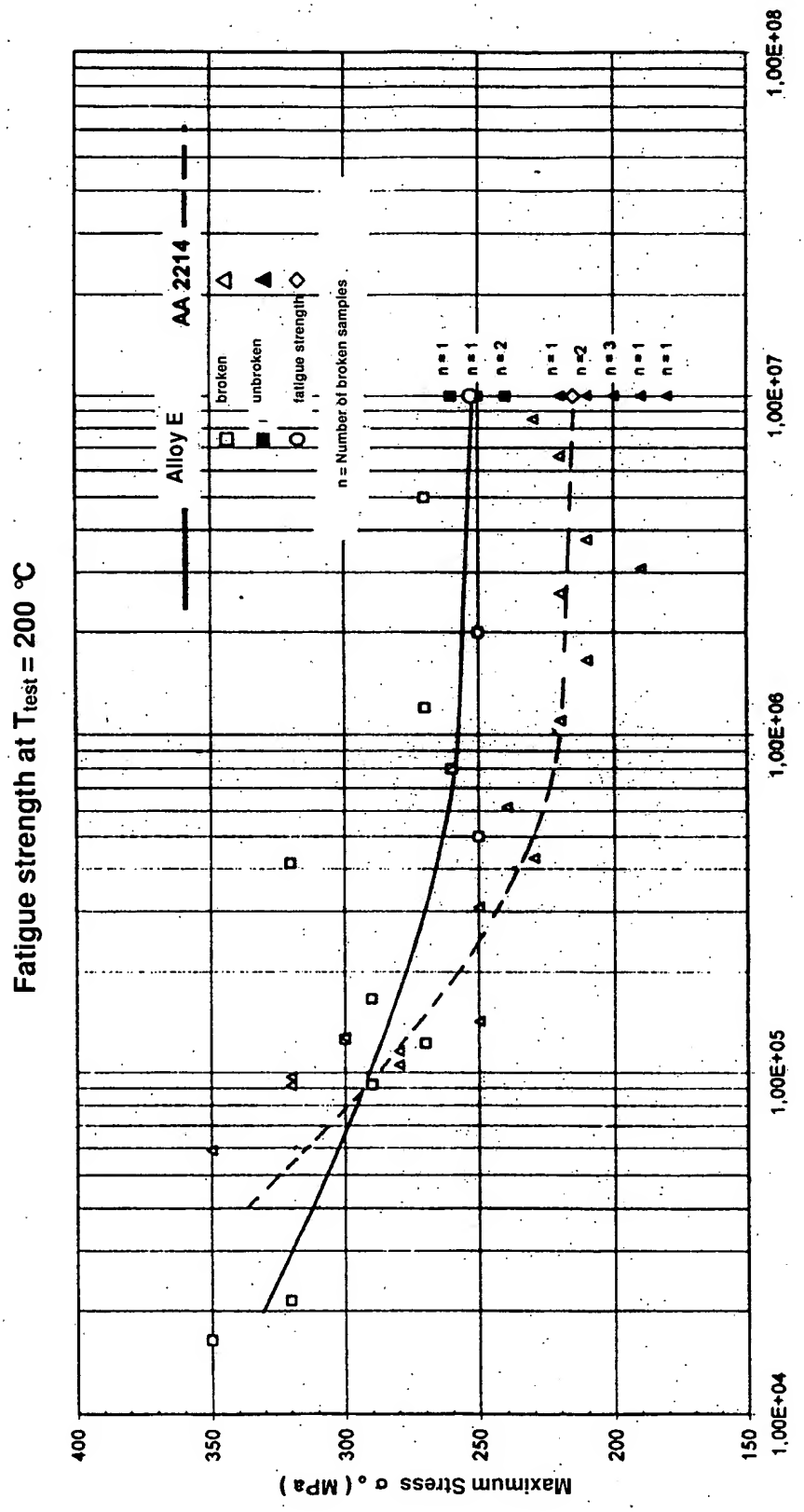

Fatigue strength at T_{test} = 200 °C
Alloy E
AA 2214
broken
unbroken
fatigue strength
n = Number of broken samples
n = 1
n = 1
n = 2
n = 1
n = 2
n = 3
n = 1
n = 1
Maximum Stress σ (MPa)
400
350
300
250
200
150
Stress Reversals (-)
1,00E+04
1,00E+05
1,00E+06
1,00E+07
1,00E+08

Fig. 4b